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REMARKS

Initially, Applicants would like to thank the Examiner for acknowledging receipt and consideration of references submitted with an Information Disclosure Statement filed on July 1, 2001 and a Supplemental Information Disclosure Statement filed January 15, 2002. However, Applicants note that the Examiner did not acknowledge receipt and consideration of "INFERENZMASCHINE FUER EIN BIEGESTADIENPLANUNGSSYSTEM" to M. GEIGER et al., published May 1, 1992, volume 87, no. 6, pages 261-264, of ZWF ZEITSCHRIFT FUR WIRTSCHAFTLICHE FERTIGUNG UND AUTOMATISIERUNG", which was submitted with the above-noted Supplemental Information Disclosure Statement. In this regard, a notation appears on the returned PTO-1449 Form that "only abstract is translated". Applicants respectfully submit that, while the above-noted document is not entirely translated, the Examiner must still acknowledge receipt and consideration of the reference as its relevance is determined by its citation in the submitted Search Report. Accordingly, Applicants respectfully submit that it would be appropriate for the Examiner to affix his initials adjacent the citation of the above-noted reference on the PTO-1449 Form filed with the above noted Supplemental Information Disclosure Statement.

In the above-noted Official Action, claims 1-33 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-38 of U.S. Patent No. 6,233,538. Claims 1-3, 6-10, 13-19, 23-27 and 32-33 were rejected under 35 U.S.C. §102(b) over BOURNE (WO 96/15481). Claims 4-5, 11-12, 20 and 31 were

rejected under 35 U.S.C. §103(a) over BOURNE. Claims 1-20, 23-27 and 30-33 were also rejected under 35 U.S.C. §103(a) over HAZAMA et al. (U.S. Patent No. 5,822,207). Claims 1-20, 23-27 and 30-33 were additionally rejected under 35 U.S.C. §103(a) over LeCLAIR et al. (U.S. Patent No. 5,485,390) in view of WAKAHARA et al. (U.S. Patent No. 5,029,462). Claims 21-22 and 28-29 were objected to as being dependent upon a rejected base claim, but were otherwise indicated to be allowable if rewritten into independent form to include all of the limitations of the base claim and any intervening claims.

Initially, Applicants would like to thank the Examiner for his indication of the allowability of claims 21-22 and 28-29, if rewritten into independent form to include all of the limitations of the base claim and any intervening claims.

Additionally, with respect to the rejection of claims 1-38 under the judicially created doctrine of obviousness-type double patenting over the claims of U.S. Patent No. 6,233,538, Applicants are filing a terminal disclaimer to disclaim the terminal part of any patent granted on the present application which would extend beyond the expiration of U.S. Patent No. 6,233,538.

Applicants are filing the terminal disclaimer merely to remove any issue as to whether the claims of the above-identified application and those of U.S. Patent No. 6,233,538 in any way conflict. However, neither applicants nor the assignees intend to make any representation as to whether any obviousness-type double patenting rejection would be appropriate if the enclosed terminal disclaimer were not filed. The terminal disclaimer is being filed only to expedite the allowance of the pending claims. Accordingly, at least for

the above-mentioned reasons, Applicants respectfully request reconsideration and withdrawal of the outstanding rejections of claims 1-38 under the judicially created doctrine of obviousness-type double patenting.

Additionally, with respect to the rejections over WO 96/15481, Applicants note that WO 96/15481 relies on U.S. Patent Application Nos. 08/338,113 and 08/386,369 for priority.

In this regard, Applicants note that the shortcomings of U.S. Patent Application No. 08/386,369 that are remedied by the presently claimed invention are explicitly discussed in the present specification at page 5, line 14 to page 6, line 13. For example, references such as U.S. Patent Application No. 08/386,369 (upon which WO 96/15481 is based) are directed to process planners that handle one part at a time, and that fail to identify commonalities among parts for use in, e.g., selection of tools. Applicants note that the rejection of claims over WO 96/15481 does not address the shortcomings of WO 96/15481 that are remedied by the presently claimed invention.

In contrast to the shortcomings of WO 96/15481, claim 1 of the present application is directed to identifying setup constraints for operations to be performed on a plurality of parts and determining operations to be performed on parts that have compatible setup constraints. Further, claim 1 is directed to assigning operations that are determined to have compatible constraints to corresponding tooling states of the bending workstation. Applicants further note that claim 8 recites a method with features similar to the above-noted features of claim 1. Further, claim 16 recites features such as identifying setup constraints... and generating a shared setup plat that satisfies all of the setup constraints that are identified for said family of

parts. Further, claim 25 recites an apparatus with features similar to the above-noted features of claim 16.

The outstanding Official Action asserts that the features of the above-noted independent claims are disclosed at page 41, line 21 to page 54, line 25; fig. 8-12, 20 and corresponding text. However, the description of BOURNE cited at pages 3 and 4 of the Official Action addresses a "bending plan", where the "bending plan" described in the applied portions of BOURNE is only for a single part, rather than a "plurality of parts". In this regard, given the great complexity that is taught in BOURNE as to setting up a plan for a single part, Applicants submit that there is no suggestion whatsoever to modify the teachings of BOURNE to develop a multi-part bending plans as recited in the features of the claims of the present application. In any case, in view of at least the above-noted deficiencies, Applicants respectfully submit that BOURNE does not disclose each and every feature of the independent claims of the present application, as would be required for a rejection of such claims to be proper under 35 U.S.C. §102(b).

With respect to the rejection of claims 1-20, 23-27, and 30-33 under 35 U.S.C. §103(a) over U.S. Patent No. 5,822,207, Applicants note that the '207 patent is also directed to a bending plan for a single part. Accordingly, Applicants submit that the '207 patent is no more relevant to the claimed invention than the BOURNE reference described above. In particular, a composite setup plan or compatible constraints in the '207 reference do not disclose or suggest the claimed invention because only a single part is being considered in the '207 patent. In other words, the '207 reference does not disclose any consideration to e.g., the

arrangement and/or grouping of bending operations for multiple parts based on compatibility of the bending operations for different parts.

In this regard, the Official Action admits that "Hazama et al. does not explicitly teach multi-part setup". However, the Official Action liberally takes "Official Notice" that 'it was well known to those of ordinary skill in the art at the time of the invention to optimize scheduling, taking into account various constraints, using expert systems. In any case, Hazama states "[t]he intelligent manufacturing system manages and distributes part design and manufacturing information throughout the locations of a production facility'. The expert planning system includes a plurality of expert modules for proposing a bending plan, including bend sequence and tooling selections, and robot motion planning and repositioning.". Clearly, this includes more than a single part.' Applicants respectfully submit that the above-noted assertions are in error and that the Examiner's characterization of the reference, even if taken as true, does not provide a proper basis for the rejection of claims under 35 U.S.C. §103 over the '207 patent.

In particular, Applicants note that the Official Action applies multiple separate prior art references in multiple rejections; however, none of the references (including the '207 reference) applied in the Official Action teach the recited features for a "multi-part set-up plan". Accordingly, if the Examiner persists in maintaining any rejection using "Official Notice", i.e., that such claimed features are "well known", Applicants respectfully request that the Examiner provide a relevant reference that teaches the features missing from the references being applied, as well as a suggestion in the prior art to modify the references to

incorporate such teachings.

Applicants further assert that the repeated taking of "Official Notice" for missing features in the rejections over the '207 patent, without any support, as well as the failure to address such features in the rejection over WO 96/15481, are actually evidence of the impropriety of the taking of Official Notice, insofar as the purportedly "well known" features are missing from the numerous applied references. In this regard, the Examiner is respectfully requested to review MPEP section 2144.03, which notes "Official Notice unsupported by documentary evidence should only be taken by the Examiner where the facts asserted to be well-known, or to be common knowledge in the art are capable of instant and unquestionable demonstration as being well-known" (emphasis added).

In any case, Applicants respectfully submit that the '207 patent does not disclose or suggest, in the claimed combination, "a method for multi-part setup planning... comprising... determining, in accordance with the setup constraints that are identified, operations to be performed on said parts that have compatible setup constraints... and assigning operations that are determined to have compatible constraints to corresponding tooling stages of the bending workstation", as is recited in claim 1. Applicants further submit that a teaching of merely distributing design and manufacturing information throughout a manufacturing facility does not lead to the invention recited in claim 1, i.e., that relates to "multi-part setup planning" as recited in claim 1. Of course, Applicants additionally assert that the similar and/or related features of claims 8, 16 and 25 are additionally not disclosed or suggested in HAZAMA. Accordingly, Applicants respectfully assert that the above-noted features of

claims 1, 8, 16 and 25 are not disclosed or suggested by HAZAMA.

Furthermore, Applicants note that the Official Action asserts that it would be obvious to one of ordinary skill in the art at the time of the invention to generalize setup planning for one piece of sheet metal to apply to more than one piece of sheet metal. Applicants respectfully submit that the Examiner's assertion is inappropriate. In this regard, for an obviousness rejection to be proper, the rejection must include an evidentiary basis supporting his assertion of obviousness. However, the conclusory statement that "Clearly, this indicates more than a single part" sets forth a conclusion that is both improper and inadequate to establish a proper obviousness rejection. In particular, Applicants' claims do not merely recite "more than a single part". Further, Applicants claims are not rendered obvious by a manufacturing facility as described in the Official Action. Rather, Applicants' claim 1 is directed to, e.g., "multi-part setup planning... comprising... assigning operations that are determined to have compatible constraints to corresponding tooling stages of the bending workstation to develop a composite setup plan for said plurality of parts" in claim 1. The implied presence of "more than a single part" in a manufacturing facility in a reference simply does not suggest the specific features recited in the claims of the present application. Accordingly, Applicants respectfully assert that the above-noted features of claims 1, 8, 16 and 25 are not disclosed or suggested by HAZAMA.

Additionally, Applicants respectfully traverse the rejection of claims 1-20, 23-27 and 30-33 under 35 U.S.C. §103(a) over LECLAIR et al. in view of WAKAHARA (U.S. Patent No. 5,029,462). In particular, the Official Action includes "Official Notice" that "it would

have been obvious... that the bending of sheet metal is a standard and well know machining process - and thus the disclosure of LeCLAIR et al. would be relevant as applied to sheet metal bending". The Official Action also applies WAKAHARA et al. for the teaching of "bending a workpiece including setting a bending process and preparing bending data". Additionally, as with the '207 patent, the Official Action takes "Official Notice" that "it would have been obvious to... generalize setup planning for one piece of sheet metal to more than one piece of sheet metal".

Applicants again request that the Examiner provide evidence of a reference that teaches the above-noted features recited in the claims of the present application, as well as a suggestion in the prior art to modify the references to incorporate such teachings. In this regard, by admitting that features such as "setup planning for.. more than one piece of sheet metal" is not disclosed or suggested in the '207 patent, LeCLAIR or WAKAHARA, and by failing to address such features in the rejection over WO 96/15481, Applicants respectfully submit that all evidence of record indicates that such a feature is not "well known in the art".

Furthermore, Applicants respectfully submit that it is not merely "setup planning for... more than one piece of sheet metal" that is recited in the claims of the present application; rather, claim 1 recites features such as "assigning operations that are determined to have compatible constraints to corresponding tooling stages of the bending workstation to develop a composite setup plan for said plurality of parts". Accordingly, even "planning for... more than one piece of sheet metal" would not necessarily result in, e.g., determining operations that have compatible constraints, or assigning such operations to corresponding tooling

stages of the bending workstation, as is recited in claim 1. As noted above, Applicants respectfully submit that claims 8, 16 and 25 each recite features similar to the above-noted features of claim 1. Accordingly, Applicants respectfully request the withdrawal of the rejection of claims 1, 8, 16 and 25 over LeCLAIR and WAKAHARA.

Accordingly, Applicants respectfully request an indication of the allowability of each of the claims of the present application in view of the herein-contained remarks. In this regard, Applicants respectfully submit that each of the independent claims recites a combination of features that are not disclosed, suggested or rendered obvious by any of the references applied in the Official Action.

Applicants further submit that each of the dependent claims is allowable, at least for depending, directly or indirectly, from an allowable independent claim, as well as for reasons related to their own recitations. For example, Applicants note that numerous of the dependent claims recite features that further define the features of the independent claims for which the Official Action has taken Official Notice. As an example, claim 2 recites "identifying a set of said operations that have compatible setup constraints by locating tooling stages that can accommodate each operation within said set of operations"; whereas the Official Action does not identify any reference that discloses or suggests the coordination of bending for multiple parts that would be required for the references to be properly applied to the claims of the present application.

In view of the above-noted remarks, Applicants respectfully submit that the Official Action improperly takes "Official Notice" of the existence in the prior art of numerous

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claimed features, at least because the claimed features are not present in the prior art. Accordingly, if the Examiner persists in the assertion that it is "well known" to coordinate and/or cooperatively plan bending of multiple pieces in the manner recited in the pending claims, Applicants respectfully request that the Examiner provide a reference that evidences such teachings in the context of the presently claimed invention, as well as a suggestion in the prior art to modify the applied references to incorporate such teachings. In the absence of such teachings and motivation, Applicants respectfully submit that withdrawal of each of the outstanding rejections is appropriate.

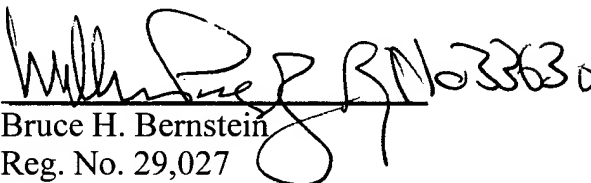
SUMMARY AND CONCLUSION

Applicants believe that the present application is in condition for allowance. Accordingly, reconsideration of the rejections set forth in the outstanding Official Action and allowance of the present application and all the claims therein are respectfully requested.

Should there be any comments or questions, the Examiner is invited to contact the undersigned at the below-listed telephone number.

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